

Use Attainability Analysis

for

WBID 2572 Lick Creek

Submitted by  
SES Inc.

to

Missouri Department of Natural Resources  
Water Protection Program

Date received: June 4, 2007

**Field Data Sheets for Recreational Use Stream Surveys**  
**Data Sheet B - Site Characterization**  
**(must be completed for each site)**

WBID                    2572  
 Site #                    1

Date and Time:                    5/20/2007 9:15

Current Weather Conditions                    Sunny, clear skies

Weather Conditions for Past 10 days:                    Rain showers on 5/11, 5/12, and 5/15

Drought Conditions? No

Site Location (e.g. road crossing)                    100 yards downstream of Waste Water Treatment Facility

GPS Mark:                    41

Upstream Photo                    80                    Downstream Photo                    81

**Uses Observed (Uses actually observed at time of survey) Circle**

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	<b>None of the Above</b>	Other	

**Surrounding Conditions**

City/county parks	Playgrounds	MDC conservation lands	Urban areas
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	Fence
Steep slopes	<b>None of the Above</b>	Other	

**Indications of Human Use**

Roads	Rope swings	Foot paths/prints	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	Other:	<b>None of the Above</b>

<b>WBID #</b>	2572	<b>Site #</b>	1
<b>Mark #</b>	41	<b>Dissolved Oxygen (ppm)</b>	10.5
<b>Upstream Views Physical Dimensions:</b>	Is there any water present at this view?      yes		

If so, is there an obvious current? yes

**Select one of the following channel features:**

% of Channel Feature

Riffle	27				
Run	9				
Pool	64				

**Downstream View's Physical Dimensions:** Is there any water present at this view?

If so, is there an obvious current?


Substrate:

15% Cobble	15% Gravel	0% Sand	35% Silt
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0% Mud/Clay	35% Bedrock
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**Aquatic Vegetation:** (Note amount of vegetation or algal growth at the assessment site)

Vegetation along banks, little algae covering rocks, and no floating algae present

## Water Characteristics

Odor	Sewage	Musky	Chemical	<b>None</b>	Other
Color	<b>Clear</b>	Green	Gray	Milky	Other
Bottom Deposit	Sludge	Solids	Fine Sed.	<b>None</b>	Other
Surface Deposit	Oil	Scum	Foam	<b>None</b>	Other

**Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)**  
**(Median Depth Shown in Bold)**

Site # 1

Mark # 41

	Depth (m)		Depth (m)		Depth (m)
<b>Transect 1</b>	0.05	<b>Transect 5</b>	0.30	<b>Transect 9</b>	0.35
Substrate:	0.05	Substrate:	0.30	Substrate:	0.60
Bedrock	0.10	Bedrock, Silt	0.75	Bedrock, Cobble, Silt, Gravel	0.65
Water Clarity:	0.15	Water Clarity:	0.65	Water Clarity:	0.45
Clear	0.20	Clear	0.70	Clear	0.00
Channel Feature:	0.25	Channel Feature:	0.85	Channel Feature:	0.00
Run	0.15	Pool	0.85	Pool	0.00
Channel Width:	0.15	Channel Width:	0.55	Channel Width:	0.15
7 yards	0.05	15 yards	0.50	25 yards	0.30
<b>0.13</b>	0.05	<b>0.60</b>	0.35	<b>0.23</b>	0.10
<b>Transect 2</b>	0.05	<b>Transect 6</b>	0.30	<b>Transect 10</b>	0.10
Substrate:	0.05	Substrate:	0.50	Substrate:	0.15
Bedrock	0.05	Silt, Cobble, Gravel	0.70	Bedrock, Cobble, Silt, Gravel	0.25
Water Clarity:	0.05	Water Clarity:	0.65	Water Clarity:	0.30
Clear	0.05	Clear	0.55	Clear	0.60
Channel Feature:	0.10	Channel Feature:	0.40	Channel Feature:	0.80
Riffle	0.10	Pool	0.50	Pool	1.00
Channel Width:	0.10	Channel Width:	0.55	Channel Width:	1.0+
13 yards	0.10	17 yards	0.35	14 yards	0.75
<b>0.08</b>	0.10	<b>0.50</b>	0.35	<b>0.35</b>	0.35
<b>Transect 3</b>	0.10	<b>Transect 7</b>	0.35	<b>Transect 11</b>	0.30
Substrate:	0.10	Substrate:	0.60	Substrate:	0.30
Bedrock, Silt	0.10	Bedrock, Silt	0.70	Bedrock, Cobble, Silt, Gravel	0.15
Water Clarity:	0.10	Water Clarity:	0.80	Water Clarity:	0.15
Clear	0.15	Clear	0.80	Clear	0.05
Channel Feature:	0.10	Channel Feature:	0.80	Channel Feature:	0.00
Riffle	0.10	Pool	0.75	Riffle	0.05
Channel Width:	0.15	Channel Width:	0.60	Channel Width:	0.05
13 yards	0.15	19 yards	0.55	15 yards	0.05
<b>0.10</b>	0.20	<b>0.65</b>	0.25	<b>0.05</b>	0.05
<b>Transect 4</b>	0.35	<b>Transect 8</b>	0.20		
Substrate:	0.40	Substrate:	0.40		
Bedrock, Silt	0.40	Cobble, Silt, Gravel	0.35		
Water Clarity:	0.45	Water Clarity:	0.30		
Clear	0.50	Clear	0.05		
Channel Feature:	0.45	Channel Feature:	0.00		
Pool	0.45	Pool/Riffle	0.05		
Channel Width:	0.45	Channel Width:	0.10		
15 yards	0.30	20 yards	0.05		
<b>0.43</b>	0.25	<b>0.08</b>	0.05		

**Field Data Sheets for Recreational Use Stream Surveys**  
**Data Sheet B - Site Characterization**  
**(must be completed for each site)**

WBID                    2572  
 Site #                    2

Date and Time:            5/20/2007 10:10

Current Weather Conditions            Sunny, Clear Skies

Weather Conditions for Past 10 days:    Rain showers on 5/11, 5/12, and 5/15

Drought Conditions? No

Site Location (e.g. road crossing)            500 yards downstream of WWTF

GPS Mark:            42

Upstream Photo                            82                    Downstream Photo                            83

**Uses Observed (Uses actually observed at time of survey) Circle**

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	<b>None of the Above</b>	Other	

**Surrounding Conditions**

City/county parks	Playgrounds	MDC conservation lands	Urban areas
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	Fence
Steep slopes	<b>None of the Above</b>	Other	

**Indications of Human Use**

Roads	Rope swings	Foot paths/prints	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	Other:	<b>None of the Above</b>

**WBID #** 2572      **Site #** 2  
**Mark #** 42      **Dissolved Oxygen (ppm)** 9.3  
**Upstream Views Physical Dimensions:** Is there any water present at this view? yes  
 If so, is there an obvious current? yes

**Select one of the following channel features:**

	% of Channel Feature				
Riffle	19				
Run	9				
Pool	72				

**Downstream View's Physical Dimensions:** Is there any water present at this view?

If so, is there an obvious current?


Substrate:

35% Cobble	35% Gravel	0% Sand	20% Silt
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0% Mud/Clay	10% Bedrock
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**Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)**

Vegetation along the banks, little algae covering rocks, and no floating algae present

### Water Characteristics

Odor	Sewage	Musky	Chemical	<b>None</b>	Other
Color	<b>Clear</b>	Green	Gray	Milky	Other
Bottom Deposit	Sludge	Solids	Fine Sed.	<b>None</b>	Other
Surface Deposit	Oil	Scum	Foam	<b>None</b>	Other

**Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)**  
**(Median Depth Shown in Bold)**

Site # 2

Mark # 42

Depth (m)		Depth (m)		Depth (m)	
<b>Transect 1</b>	0.30	<b>Transect 5</b>	0.05	<b>Transect 9</b>	0.05
Substrate:	0.50	Substrate:	0.10	Substrate:	0.15
Cobble,Gravel,Silt	0.75	Cobble, Gravel	0.05		0.20
Water Clarity:	0.95	Water Clarity:	0.05	Water Clarity:	0.30
Clear	0.95	Clear	0.15		0.30
Channel Feature:	0.95	Channel Feature:	0.20	Channel Feature:	0.35
Pool	0.85	Riffle	0.15		0.25
Channel Width:	0.70	Channel Width:	0.20	Channel Width:	0.30
6 yards	0.65	7 yards	0.20		0.20
<b>0.73</b>	0.55	<b>0.13</b>	0.10	<b>0.23</b>	0.15
<b>Transect 2</b>	0.20	<b>Transect 6</b>	0.15	<b>Transect 10</b>	0.10
Substrate:	1.00	Substrate:	0.25	Substrate:	0.30
Cobble,Gravel,Silt	1.00	Rock,Silt,Cobble,Gravel	0.45	Cobble, Gravel	0.30
Water Clarity:	1.00	Water Clarity:	0.60	Water Clarity:	0.30
Clear	1.00	Clear	0.60	Clear	0.40
Channel Feature:	1.00	Channel Feature:	0.70	Channel Feature:	0.50
Pool	1.00	Run	0.60	Pool	0.30
Channel Width:	0.75	Channel Width:	0.55	Channel Width:	0.45
9 yards	0.25	6 yards	0.35	8 yards	0.45
<b>1.00</b>	0.20	<b>0.50</b>	0.25	<b>0.30</b>	0.20
<b>Transect 3</b>	0.55	<b>Transect 7</b>	0.25	<b>Transect 11</b>	0.05
Substrate:	0.55	Substrate:	0.50	Substrate:	0.05
Cobble,Gravel,Silt	0.55	Cobble, Gravel	0.70	Cobble, Gravel	0.10
Water Clarity:	0.50	Water Clarity:	0.75	Water Clarity:	0.05
Clear	0.60	Clear	0.85	Clear	0.15
Channel Feature:	0.45	Channel Feature:	0.80	Channel Feature:	0.20
Pool	0.45	Pool	0.75	Pool	0.25
Channel Width:	0.25	Channel Width:	0.85	Channel Width:	0.25
10 yards	0.20	9 yards	0.75	18 yards	0.30
<b>0.48</b>	0.20	<b>0.75</b>	0.50	<b>0.15</b>	0.15
<b>Transect 4</b>	0.20	<b>Transect 8</b>	0.25		
Substrate:	0.25	Substrate:	0.20		
Cobble,Gravel,Silt	0.35	Cobble, Gravel	0.30		
Water Clarity:	0.35	Water Clarity:	0.25		
Clear	0.30	Clear	0.05		
Channel Feature:	0.30	Channel Feature:	0.00		
Pool	0.25	Riffle	0.00		
Channel Width:	0.20	Channel Width:	0.00		
11 yards	0.10	9 yards	0.20		
<b>0.25</b>	0.10	<b>0.15</b>	0.10		

**Field Data Sheets for Recreational Use Stream Surveys**  
**Data Sheet B - Site Characterization**  
**(must be completed for each site)**

WBID                    2572  
Site #                    3

Date and Time:            5/20/2007 10:45

Current Weather Conditions

Weather Conditions for Past 10 days:    Rain showers on 5/11, 5/12, and 5/15

Drought Conditions? No

Site Location (e.g. road crossing)            1000 yards downstream of crossing

GPS Mark:            43

Upstream Photo                                    84                    Downstream Photo                                    85

**Uses Observed (Uses actually observed at time of survey) Circle**

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	<b>None of the Above</b>	Other	

**Surrounding Conditions**

City/county parks	Playgrounds	MDC conservation lands	Urban areas
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	Fence
Steep slopes	<b>None of the Above</b>	Other	

**Indications of Human Use**

Roads	Rope swings	Foot paths/prints	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	Other:	<b>None of the Above</b>



**WBID #** 2572      **Site #** 3  
**Mark #** 43      **Dissolved Oxygen (ppm)** 11.9  
**Upstream Views Physical Dimensions:** Is there any water present at this view? yes  
 If so, is there an obvious current? yes

**Select one of the following channel features:**

	% of Channel Feature				
Riffle	9				
Run	0				
Pool	91				

**Downstream View's Physical Dimensions:** Is there any water present at this view?

If so, is there an obvious current?


Substrate:

35% Cobble	35% Gravel	0% Sand	30% Silt
0% Mud/Clay	0% Bedrock		

**Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)**

Vegetation along banks, no floating algae present, little algae covering rocks, lots of filamentous green algae, and scattered areas of aquatic grasses.

**Water Characteristics**

Odor	Sewage	Musky	Chemical	<b>None</b>	Other
Color	<b>Clear</b>	Green	Gray	Milky	Other
Bottom Deposit	Sludge	Solids	Fine Sed.	<b>None</b>	Other
Surface Deposit	Oil	Scum	Foam	<b>None</b>	Other

**Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)**  
**(Median Depth Shown in Bold)**

Site # 3

Mark # 43

	Depth (m)		Depth (m)		Depth (m)
<b>Transect 1</b>	0.05	<b>Transect 5</b>	0.10	<b>Transect 9</b>	0.45
Substrate:	0.10	Substrate:	0.25	Substrate:	0.50
Gravel,Cobble	0.15	Cobble,Gravel,Silt	0.35	Cobble,Gravel,Silt	0.35
Water Clarity:	0.20	Water Clarity:	0.45	Water Clarity:	0.30
Clear	0.25	Clear	0.55	Clear	0.30
Channel Feature:	0.25	Channel Feature:	0.65	Channel Feature:	0.20
Riffle	0.30	Pool	0.80	Pool	0.20
Channel Width:	0.20	Channel Width:	0.75	Channel Width:	0.10
7 yards	0.10	18 yards	0.35	21 yards	0.10
<b>0.18</b>	0.10	<b>0.40</b>	0.15	<b>0.25</b>	0.10
<b>Transect 2</b>	0.10	<b>Transect 6</b>	0.05	<b>Transect 10</b>	0.05
Substrate:	0.20	Substrate:	0.35	Substrate:	0.15
Gravel,Cobble	0.25	Cobble,Gravel,Silt	0.45	Cobble,Gravel,Silt	0.15
Water Clarity:	0.35	Water Clarity:	0.50	Water Clarity:	0.10
Clear	0.45	Clear	0.55	Clear	0.20
Channel Feature:	0.40	Channel Feature:	0.55	Channel Feature:	0.15
Pool	0.35	Pool	0.60	Pool	0.15
Channel Width:	0.45	Channel Width:	0.65	Channel Width:	0.20
10 yards	0.40	18 yards	0.60	23 yards	0.25
<b>0.35</b>	0.20	<b>0.53</b>	0.25	<b>0.15</b>	0.30
<b>Transect 3</b>	0.10	<b>Transect 7</b>	0.10	<b>Transect 11</b>	0.05
Substrate:	0.40	Substrate:	0.25	Substrate:	0.10
Cobble,Gravel,Silt	0.40	Cobble,Gravel,Silt	0.35	Cobble,Gravel,Silt	0.15
Water Clarity:	0.40	Water Clarity:	0.45	Water Clarity:	0.25
Clear	0.50	Clear	0.50	Clear	0.10
Channel Feature:	0.55	Channel Feature:	0.50	Channel Feature:	0.15
Pool	0.55	Pool	0.60	Pool	0.15
Channel Width:	0.65	Channel Width:	0.40	Channel Width:	0.10
13 yards	0.40	18 yards	0.30	26 yards	0.10
<b>0.40</b>	0.25	<b>0.38</b>	0.20	<b>0.10</b>	0.10
<b>Transect 4</b>	0.10	<b>Transect 8</b>	0.10		
Substrate:	0.50	Substrate:	0.20		
Cobble,Gravel,Silt	0.55	Cobble,Gravel,Silt	0.20		
Water Clarity:	0.60	Water Clarity:	0.20		
Clear	0.55	Clear	0.25		
Channel Feature:	0.60	Channel Feature:	0.30		
Pool	0.60	Pool	0.40		
Channel Width:	0.45	Channel Width:	0.45		
15 yards	0.40	23 yards	0.45		
<b>0.53</b>	0.15	<b>0.28</b>	0.30		

**WBID# 2572**



**Site# 1 Photo ID# 80, Upstream**



**Site# 1 Photo ID# 81, Downstream**



**Site# 2 Photo ID# 82, Upstream**



**Site# 2 Photo ID# 83, Downstream**



**WBID# 2572**



**Site# 3 Photo ID# 84, Upstream**



**Site# 3 Photo ID# 85, Downstream**

